Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services

STATEMENT OF BASIS

Chalmette Cane Sugar Refinery
American Sugar Refining, Inc.
Arabi, St. Bernard Parish, Louisiana
Agency Interest Number: 1329
Activity Number: PER20090001
Proposed Permit Number: 2500-00009-V1

I. APPLICANT

Company:
American Sugar Refining, Inc.
7417 N Peters St
Arabi, Louisiana 70032

Facility:
American Sugar Refining, Inc.
7417 N Peters St
Arabi, St. Bernard Parish, Louisiana
Approximate UTM coordinates are 789.226 kilometers East and 3316.252 kilometers North, Zone 15

II. FACILITY AND CURRENT PERMIT STATUS

The Chalmette Cane Sugar Refinery currently produces refined granulated sugar, confectionery sugar, blackstrap molasses, and several specialty products. Raw cane sugar is received by ship, barge, truck, and rail and is stored in sheds until processed. The raw sugar is refined through the processes of affination, carbonation, press filtration, bone char defecation, crystallization, and centrifugation. The drying operation consists of countercurrent flows of hot air and sugar, creating dust which is recovered by cyclone gravimetric separation and wet scrubbing.

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III. PROPOSED PROJECT/PERMIT INFORMATION

Application

A permit application and Emission Inventory Questionnaire were submitted by American Sugar Refining, Inc. on January 27, 2009 requesting a minor modification to the current Part 70 operating permit. Additional information dated May 1, 2009 was also received.

Project

With this modification, American Sugar Refining, Inc. proposes to update emissions for Boilers 1 and 7 utilizing the most recent stack test data and reconcile emissions for the remaining boilers with the most current and accurate literature. A Boiler Cap will be created for operational flexibility by capping natural gas usage and limiting NOx emissions to prevent the facility from becoming a major source under definition of PSD. Increased maximum hourly emission rates for all boilers, a permit specific condition to establish a Boiler Cap, and a correction to the naming of the High Pressure Boilers (EQT076 – EQT080) will also be included in this modification.

Proposed Permit

Permit 2500-00009-V1 will be the Part 70 operating permit modification of Part 70 operating permit 2500-00009-V0 for the Chalmette Cane Sugar Refinery.

Permitted Air Emissions

Estimated emissions in tons per year are as follows:

Pollutant	Before	After	Change
PM_{10}	242.19	245.82	+ 3.63
SO_2	1.19	1.45	+ 0.26
NO_X	227.60	249.30	+ 21.70
CO	99.33	121.72	+22.39
VOC *	12.01	13.65	+ 1.64

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*VOC LAC 33:III Chapter 51 Toxic Air Pollutants (TAPs):

Pollutant	Before	After	Change
Ammonia	0.040	0.040	-
Hydrochloric Acid	0.006	0.006	-
Total	0.046	0.046	-

Other VOC (TPY): 13.604

IV REGULATORY ANALYSIS

The applicability and exemptions of the appropriate regulations is straightforward and provided in the Specific Requirements section, and Section X. Table 1 and Section XI. Table 2 of the proposed permit. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are also provided in the Specific Requirements section of the proposed permit.

Prevention of Significant Deterioration/Nonattainment Review

Permit No. 2500-00009-V0 required Chalmette Cane Sugar Refinery to perform compliance stack testing on Boilers 1 and 7. During testing, both boilers were run at near full capacity to achieve maximum lb/hr emission rates. Boiler 1 NOx emissions and Boiler 7 NOx and CO emissions were above the maximum lb/hr permitted levels. The potential to emit with the resulting higher NOx emission factors would cause the facility to become a major source under PSD. A Boiler Cap limiting natural gas usage and NOx emissions will be put in place combining emissions from Boiler 1 and 7, and the High Pressure Boilers to prevent the facility from exceeding the 250 tons per year PSD major source threshold.

MACT Requirements

The facility is a minor source of toxic air pollutants (TAPs) pursuant to LAC 33:III.Chapter 51 and, therefore, does not constitute MACT Requirements.

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Air Quality Analysis

Emissions associated with the proposed modification were reviewed by the Air Quality Assessment Division to ensure compliance with the NAAQS and AAS. LDEQ did not require the applicant to model emissions.

General Condition XVII Activities

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to the Section VIII – General Condition XVII Activities of the proposed permit.

Insignificant Activities

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to the Section IX – Insignificant Activities of the proposed permit.

V. PERMIT SHIELD

A permit shield under 40 CFR 60.6(f) and LAC 33:III.507.I has not been requested for this action.

VI. PERIODIC MONITORING

Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards is straightforward and provided in the Specific Requirements section of the proposed permit.

VII. GLOSSARY

Carbon Monoxide (CO) – A colorless, odorless gas, which is an oxide of carbon.

Maximum Achievable Control Technology (MACT) – The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

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Hydrogen Sulfide (H_2S) – A colorless inflammable gas having the characteristic odor of rotten eggs, and found in many mineral springs. It is produced by the reaction of acids on metallic sulfides, and is an important chemical reagent.

New Source Review (NSR) – A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C ("Prevention of Significant Deterioration of Air Quality") and D ("Nonattainment New Source Review").

Nitrogen Oxides (NO_X) – Compounds whose molecules consist of nitrogen and oxygen.

Organic Compound – Any compound of carbon and another element. Examples: Methane (CH_4), Ethane (C_2H_6), Carbon Disulfide (CS_2)

Part 70 Operating Permit – Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit: $\geq$ 10 tons per year of any toxic air pollutant; $\geq$ 25 tons of total toxic air pollutants; and $\geq$ 100 tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM_{10} – Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Potential to Emit (PTE) – The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

Sulfur Dioxide (SO_2) – An oxide of sulfur.

Sulfuric Acid (H_2SO_4) – A highly corrosive, dense oily liquid. It is a regulated toxic air pollutant under LAC 33:III.Chapter 51.

Title V Permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) – Any organic compound, which participates in atmospheric photochemical reactions; that is, any organic compound other than those,

which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.